CLAIMS

What is claimed is:

1. A purified, isolated and cloned DNA sequence partially encoding a functional portion of a polypeptide component required for the synthesis of antibiotic TA.

2. The DNA sequence according to claim 1, wherein said sequence is isolated from *Myxococcus xanthus*.

3. A purified, isolated and cloned DNA sequence consisting of a DNA sequence encoding a polypeptide component required for postmodification of antibiotic TA.

4. The DNA sequence according to claim 3, wherein said sequence is isolated from *Myxococcus xanthus*.

5. A purified, isolated and cloned DNA sequence consisting of a DNA sequence encoding a gene product involved in the regulation of the biosynthesis of antibiotic TA.

6. The DNA sequence according to claim 5, wherein said sequence is isolated from *Myxococcus xanthus*.

7. A purified, isolated and cloned DNA sequence consisting of a DNA sequence (Seq. ID No:1 and 2) encoding a polypeptide component required for encoding the TA gene cluster.

8. The DNA sequence of Seq. ID No:1 and 2 altered by point mutations, deletions or insertions such as the resulting amino acid sequence is truncated.

9. A transformed *E coli* carrying Seq. ID No: ~~1 and~~ 2.

10. A vector which comprises the DNA according to claim 7.

11. A host cell, wherein the host cell is selected from the group of suitable eucaryotic and procaryotic cells, which is transformed with the vector according to claim 10.

12. The host cell according to claim 11 which is *E. coli*.

13. A recombinant expression vector comprising a DNA sequence according to claim 7.

14. A cosmid containing the DNA sequence according to claim 7.

15. A method of using the TA genes for combinatorial genetics.

16. A method of using the TA genes encoding for the synthesis, modification or regulation of antibiotic TA.